Refine Search

Search Results -

Terms	Documents
(fabric adj1 switch) same controller same (external or remote or outside)	8

Database:
US Pre-Grant Publication Full-Text Database
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EPO Abstracts Database
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Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L1

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Wednesday, June 23, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,USOC; PLUR=YES; OP=OR			
L1	(fabric adj1 switch) same controller same (external or remote or outside)	8	L1

END OF SEARCH HISTORY

h e b b cg b e e ch

Refine Search

Search Results -

Terms	Documents
(fabric adj1 switch) same controller same (external or remote or outside)	8

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
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EPO Abstracts Database
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IBM Technical Disclosure Bulletins

Search: L1

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Wednesday, June 23, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,USOC; PLUR=YES; OP=OR			
L1	(fabric adj1 switch) same controller same (external or remote or outside)	8	L1

END OF SEARCH HISTORY

h e b b cg b e e ch

Refine Search

Search Results -

Terms	Documents
L1	0

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L2

Refine Search

Recall Text Clear Interrupt

Search History

DATE: Wednesday, June 23, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L2	L1	0	L2
DB=USPT,USOC; PLUR=YES; OP=OR			
L1	(fabric adj1 switch) same controller same (external or remote or outside)	8	L1

END OF SEARCH HISTORY

h e b b cg b e e ch

Refine Search

Search Results -

Terms	Documents
(370/395.1 |370/466 |370/352 |370/419 |370/218 |370/400 |370/467 |370/422 |370/395.72 |370/362 |710/316 |710/317 |710/105 |710/315 |711/114 |379/219).ccls.	6284

Database:
- US Pre-Grant Publication Full-Text Database
- US Patents Full-Text Database
- US OCR Full-Text Database
- EPO Abstracts Database
- JPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

Search: L3

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Wednesday, June 23, 2004 Printable Copy Create Case

Set Name side by side	Query
	DB=USPT,USOC; PLUR=YES; OP=OR
L3	710/316,317,105,315;711/114;379/219;370/395.1,466,352,419,218,400,467,422,395.72,362.ccls.
	DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR
L2	L1
	DB=USPT,USOC; PLUR=YES; OP=OR
L1	(fabric adj1 switch) same controller same (external or remote or outside)

END OF SEARCH HISTORY

h e b b cg b e e ch

Refine Search

Search Results -

Terms	Documents
L1 and L3	2

Database:
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EPO Abstracts Database
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Search: L4

Refine Search

Recall Text Clear Interrupt

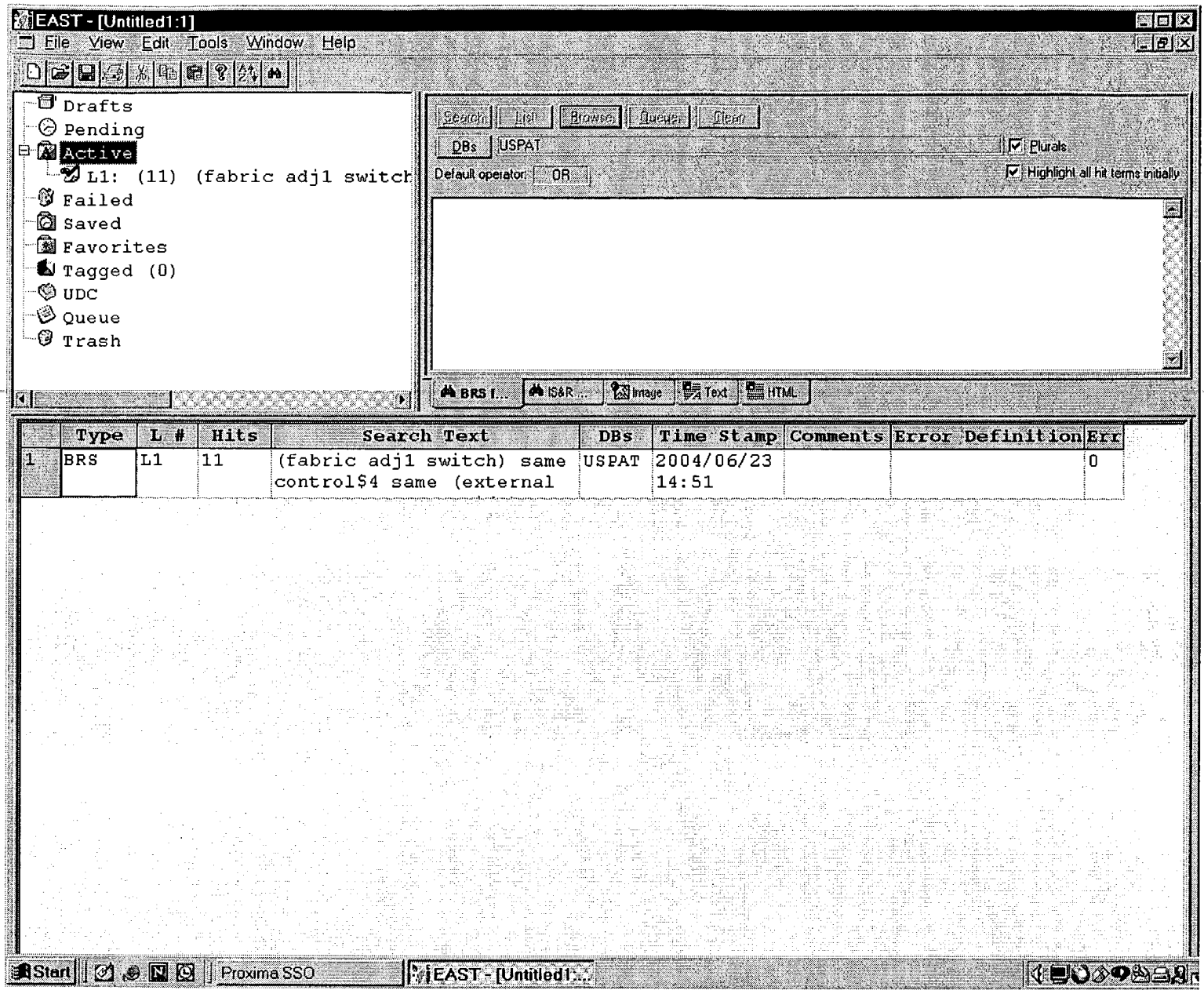
Search History

DATE: Wednesday, June 23, 2004 Printable Copy Create Case

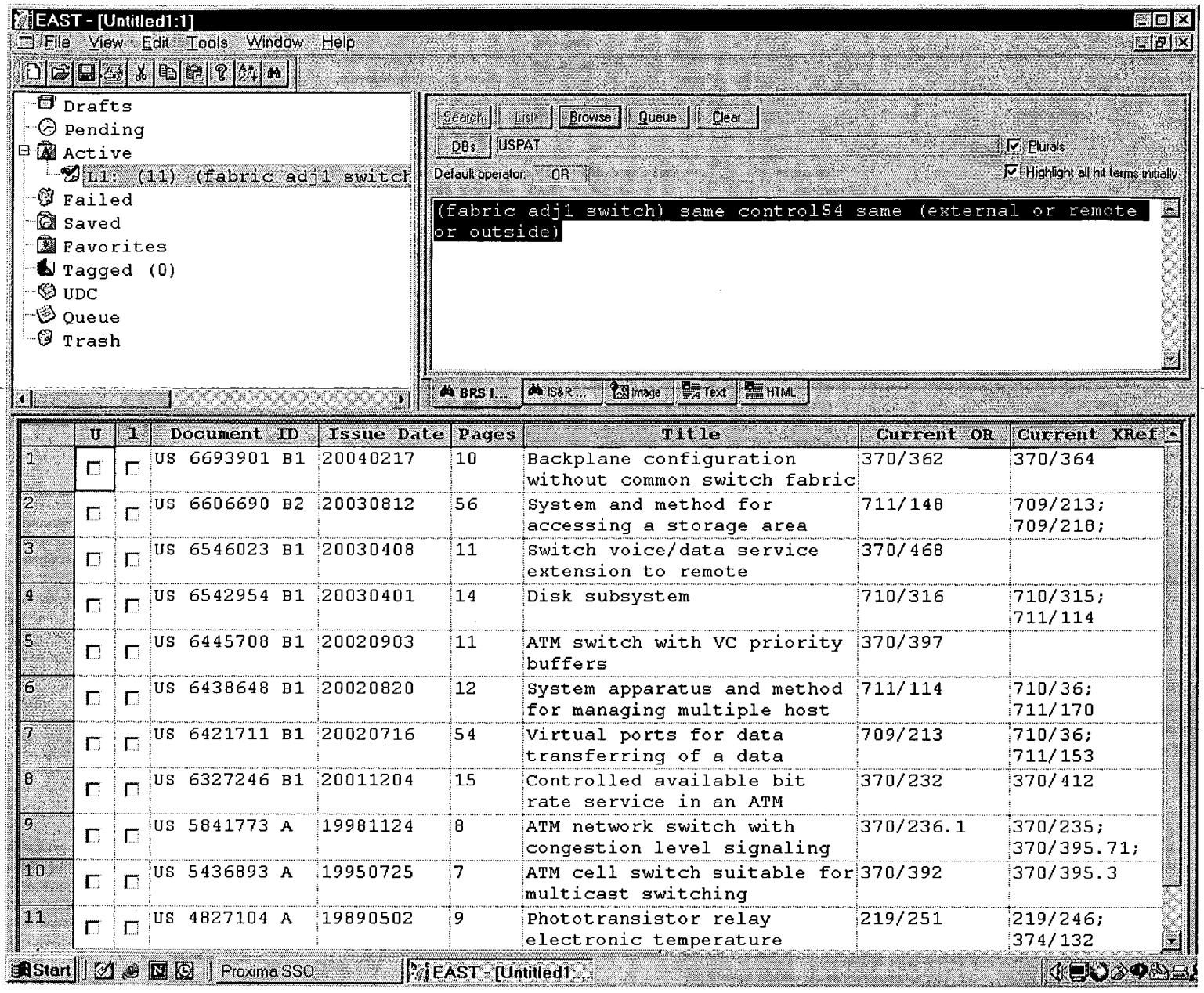
Set Name	Query
side by side	
	DB=USPT,USOC; PLUR=YES; OP=OR
L4	l1 and L3
L3	710/316,317,105,315;711/114;379/219;370/395.1,466,352,419,218,400,467,422,395.72,362.ccls.
	DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR
L2	L1
	DB=USPT,USOC; PLUR=YES; OP=OR
L1	(fabric adj1 switch) same controller same (external or remote or outside)

END OF SEARCH HISTORY

h e b b cg b e e ch



	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Err
1	BRS	L1	11	(fabric adj1 switch) same control$4 same (external	USPAT	2004/06/23 14:51			0



	U	1	Document ID	Issue Date	Pages	Title	Current OR	Current XRef
1	☐	☐	US 6693901 B1	20040217	10	Backplane configuration without common switch fabric	370/362	370/364
2	☐	☐	US 6606690 B2	20030812	56	System and method for accessing a storage area	711/148	709/213; 709/218;
3	☐	☐	US 6546023 B1	20030408	11	Switch voice/data service extension to remote	370/468	
4	☐	☐	US 6542954 B1	20030401	14	Disk subsystem	710/316	710/315; 711/114
5	☐	☐	US 6445708 B1	20020903	11	ATM switch with VC priority buffers	370/397	
6	☐	☐	US 6438648 B1	20020820	12	System apparatus and method for managing multiple host	711/114	710/36; 711/170
7	☐	☐	US 6421711 B1	20020716	54	Virtual ports for data transferring of a data	709/213	710/36; 711/153
8	☐	☐	US 6327246 B1	20011204	15	Controlled available bit rate service in an ATM	370/232	370/412
9	☐	☐	US 5841773 A	19981124	8	ATM network switch with congestion level signaling	370/236.1	370/235; 370/395.71;
10	☐	☐	US 5436893 A	19950725	7	ATM cell switch suitable for multicast switching	370/392	370/395.3
11	☐	☐	US 4827104 A	19890502	9	Phototransistor relay electronic temperature	219/251	219/246; 374/132

Your search matched **2** of **1046194** documents.
A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance** **Descending** order.

Refine This Search:
You may refine your search by editing the current search expression or enteri new one in the text box.

(fabric switch) and control* Search

☐ Check to search within this result set

Results Key:
JNL = Journal or Magazine **CNF** = Conference **STD** = Standard

1 **High-extinction directional coupler switches by compensation and elimination methods**
Hon-Ming Mak; Yanagawa, H.;
Lightwave Technology, Journal of , Volume: 12 , Issue: 5 , May 1994
Pages:899 - 908

[Abstract] [PDF Full-Text (940 KB)] **IEEE JNL**

2 **COTS fibre channel network technology insertion into avionics syste**
Gaska, T.D.;
Aerospace and Electronics Conference, 1998. NAECON 1998. Proceedings of t IEEE 1998 National , 13-17 July 1998
Pages:120 - 127

[Abstract] [PDF Full-Text (812 KB)] **IEEE CNF**

h eee e eee g e ch e ch e e f b c ch c

High-extinction directional coupler switches by compensation and elimination methods

Hon-Ming Mak Yanagawa, H.
Opto-Technol. Lab., Furukawa Electr. Co. Ltd., Chiba, Japan;
This paper appears in: **Lightwave Technology, Journal of**

Publication Date: May 1994
On page(s): 899 - 908
Volume: 12 , Issue: 5
ISSN: 0733-8724
Reference Cited: 24
CODEN: JLTEDG
Inspec Accession Number: 4732888

Abstract:
A conventional guided-wave optical directional coupler switch always presents extinction switching property less than 30 dB. One main reason is that couplir between input and output lead regions of the coupler, causing low extinction i through switching state despite the coupling strength being very weak. Anoth may be due to the asymmetric structural designs of couplers in optical integra circuits, making low extinction result in the cross switching state. In this pape propose two methods which can solve this crosstalk problem easily. One is by compensation technique in which we design an optimum structural constructi reversal Δβ-directional coupler switch, and for which theoretical prediction sh infinity extinction can be achieved where the **fabricated switch** element gav dB extinction ratio for both the through and cross switching states. In anothe coupling effect between lead waveguides are eliminated by means of refractiv **control** of the waveguides. Theoretical prediction shows that if the change of index δn is greater than 3×10^{-3}, over 60 dB extinction can result, where the **switch** element also gave more than 38 dB extinction in both the through an switching states. Fabrication error, existence of propagation loss, and stray lig scattering may be the causes of difference between predicted and experiment However, both proposed methods show evidence that it is possible to obtain a extinction ratio as high as nearly 40 dB

Index Terms:
directional couplers integrated optics optical communication equipment optical coupl

h eee e eee g e ch ch b c be be

fibres optical switches refractive index asymmetric structural designs compensation compensation technique coupling effect coupling strength cross switching state cro problem elimination methods extinction ratio fabrication error guided-wave optical d coupler switch high-extinction directional coupler switches infinity extinction low-extin switching property optical integrating circuits optimum structural construction propag refractive index **control** reversal &Delta &beta -directional coupler switch through s state

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h eee e eee g e ch ch b c be be

Hit List

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 8 of 8 returned.

☐ 1. Document ID: US 6606690 B2

Using default format because multiple data bases are involved.

L1: Entry 1 of 8 File: USPT Aug 12, 2003

US-PAT-NO: 6606690
DOCUMENT-IDENTIFIER: US 6606690 B2

TITLE: System and method for accessing a storage area network as network attached storage

DATE-ISSUED: August 12, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Padovano; Michael	Englishtown	NJ		

US-CL-CURRENT: 711/148; 709/213, 709/218, 709/220, 709/249, 711/170

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 2. Document ID: US 6542954 B1

L1: Entry 2 of 8 File: USPT Apr 1, 2003

US-PAT-NO: 6542954
DOCUMENT-IDENTIFIER: US 6542954 B1

TITLE: Disk subsystem

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

☐ 3. Document ID: US 6445708 B1

L1: Entry 3 of 8 File: USPT Sep 3, 2002

US-PAT-NO: 6445708
DOCUMENT-IDENTIFIER: US 6445708 B1

TITLE: ATM switch with VC priority buffers

h e b b g e e e f e h b ef b e

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

☐ 4. Document ID: US 6438648 B1

L1: Entry 4 of 8 File: USPT Aug 20, 2002

US-PAT-NO: 6438648
DOCUMENT-IDENTIFIER: US 6438648 B1

TITLE: System apparatus and method for managing multiple host computer operating requirements in a data storage system

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

☐ 5. Document ID: US 6421711 B1

L1: Entry 5 of 8 File: USPT Jul 16, 2002

US-PAT-NO: 6421711
DOCUMENT-IDENTIFIER: US 6421711 B1

TITLE: Virtual ports for data transferring of a data storage system

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

☐ 6. Document ID: US 6327246 B1

L1: Entry 6 of 8 File: USPT Dec 4, 2001

US-PAT-NO: 6327246
DOCUMENT-IDENTIFIER: US 6327246 B1

TITLE: Controlled available bit rate service in an ATM switch

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

☐ 7. Document ID: US 5841773 A

L1: Entry 7 of 8 File: USPT Nov 24, 1998

US-PAT-NO: 5841773
DOCUMENT-IDENTIFIER: US 5841773 A

TITLE: ATM network switch with congestion level signaling for controlling cell buffers

Full | Title | Citation | Front | Review | Classification | Date | Reference | ... | Claims | KWIC | Draw De

h e b b g e e e f e h b ef b e

☐ 8. Document ID: US 5436893 A

L1: Entry 8 of 8 File: USPT Jul 25, 1995

US-PAT-NO: 5436893
DOCUMENT-IDENTIFIER: US 5436893 A

TITLE: ATM cell switch suitable for multicast switching

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw. De

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms	Documents
(fabric adj1 switch) same controller same (external or remote or outside)	8

Display Format: - Change Format

Previous Page Next Page Go to Doc#

h e b b g e e e f e h b ef b e

L1: Entry 2 of 8 File: USPT Apr 1, 2003

DOCUMENT-IDENTIFIER: US 6542954 B1
TITLE: Disk subsystem

Detailed Description Text (3):
In the external storage device shown in the figure, N disk array controllers (controller section) 1-1 to 1-N (controllers in middle such as 1-2 are not shown, this applies to hereinbelow) are connected to a host computer (not shown) in an upper side, and provide M disk drive interface (disk drive I/F) controllers 2-1 to 2-M in a bottom side. The hardware configuration of the disk array controller will be described below in greater details. Each of M controllers of fibre channel fabric switch 3-1 to 3-M are respectively connected to the disk drive interface (I/F) controllers 2-1 to 2-M for controlling disk drive units through their fibre channel interface 5. L disk drive units are connected to one fibre channel fabric switch controller, a total of M by L disk drive units (4(1,1) to 4(M,L)) are connected to the fibre channel fabric switch controllers 3-1 to 3-M through fibre channel interfaces 6.

h e b b cg b cc e

First Hit Fwd Refs

Generate Collection Print

L1: Entry 2 of 8 File: USPT Apr 1, 2003

US-PAT-NO: 6542954
DOCUMENT-IDENTIFIER: US 6542954 B1

TITLE: Disk subsystem

DATE-ISSUED: April 1, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Aruga; Kazuhisa	Odawara			JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Hitachi, Ltd.	Tokyo			JP	03

APPL-NO: 09/ 495868 [PALM]
DATE FILED: February 2, 2000

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	11-024648	February 2, 1999

INT-CL: [07] G06 F 13/16, G06 F 13/42

US-CL-ISSUED: 710/316; 710/315, 711/114
US-CL-CURRENT: 710/316; 710/315, 711/114

FIELD-OF-SEARCH: 711/114, 711/111, 711/112, 714/5, 714/6, 714/7, 710/11, 710/62, 710/65, 710/74, 710/38, 710/315, 710/316

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5077736	December 1991	Dunphy, Jr. et al.	714/7
☐	5274645	December 1993	Idleman et al.	714/6
☐	5471586	November 1995	Sefidvash et al.	710/104
☐	5699533	December 1997	Sakai	710/316
☐	5729763	March 1998	Leshem	710/38

h e b b g e e e f c e h b e ge

☐	5768551	June 1998	Bleiweiss et al.	710/316
☐	5867640	February 1999	Aguilar et al.	714/6
☐	6148414	November 2000	Brown et al.	714/9
☐	6185203	February 2001	Berman	370/351
☐	6247077	June 2001	Muller et al.	710/74
☐	6324181	November 2001	Wong et al.	370/403

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
10171746	June 1998	JP	

ART-UNIT: 2187

PRIMARY-EXAMINER: Portka; Gary J.

ATTY-AGENT-FIRM: Antonelli, Terry, Stout & Kraus, LLP

ABSTRACT:

A protocol controller disposed between switches in a fiber channel fabric switch circuit and disk drive units for converting a protocol to enable one-to-one connectivity established between controllers and disk drive units.

35 Claims, 7 Drawing figures

First Hit Fwd Refs

End of Result Set

Generate Collection Print

L1: Entry 8 of 8 File: USPT Jul 25, 1995

DOCUMENT-IDENTIFIER: US 5436893 A
TITLE: ATM cell switch suitable for multicast switching

Brief Summary Text (5):
An ATM switch comprises, in general terms, a plurality of link controllers each connected via an input port and an output port to a switch fabric which switches data cells from any input port to any output port. Each link controller has a plurality of data links connected to it. The link controllers comprise input controllers or receivers, whose principal function is simply to receive the bit stream from the external link and to divide it up into cells for presentation to the cell fabric, and output controllers or transmitters, which serve to convert the separate cells from the switch fabric into a continuous bit stream again for forwarding on the appropriate external link.

First Hit Fwd Refs

End of Result Set

☐ Generate Collection | Print

L1: Entry 8 of 8 File: USPT Jul 25, 1995

US-PAT-NO: 5436893
DOCUMENT-IDENTIFIER: US 5436893 A

TITLE: ATM cell switch suitable for multicast switching

DATE-ISSUED: July 25, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barnett; Richard	Chelmsford			GB

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Netcom Limited	Essex			GB	03

APPL-NO: 08/ 147939 [PALM]
DATE FILED: November 5, 1993

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
GB	9225480	December 5, 1992

INT-CL: [06] H04 L 12/18, H04 L 12/56

US-CL-ISSUED: 370/60.1; 370/94.2
US-CL-CURRENT: 370/392; 370/395.3

FIELD-OF-SEARCH: 370/60, 370/60.1, 370/62, 370/94.1, 370/94.2, 370/94.3, 370/110.1

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL | Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4813038	March 1989	Lee	370/60
☐	4947388	August 1990	Kuwahara et al.	370/94.1
☐	5202885	April 1993	Schrodi et al.	370/60
☐	5229991	July 1993	Turner	370/60

h e b b g e e e f c e h b e ge

ART-UNIT: 263

PRIMARY-EXAMINER: Kizou; Hassan

ATTY-AGENT-FIRM: Gordon; David P.

ABSTRACT:

An ATM cell switch suitable for multicast switching comprises an input stage arranged to detect a multicast cell and to add to the cell header a switch header identifying the outputs to which copies are to be sent, a switch fabric arranged to identify multicast cells, to make identical copies thereof and to route the copies according to the switch header, and an output stage arranged to make further copies according to the data links which are to receive the multicast and to assign the appropriate VPI/VCI to the cell header of each copy according to data stored in said stage.

11 Claims, 4 Drawing figures

Refine Search

Search Results -

Terms	Documents
L5 and (disk adj2 controller)	2

Database:
US Pre-Grant Publication Full-Text Database
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JPO Abstracts Database
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Search: L6

Refine Search

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Search History

DATE: Wednesday, June 23, 2004 Printable Copy Create Case

Set Name Query
side by side

DB=USPT,USOC; PLUR=YES; OP=OR

L6 L5 and (disk adj2 controller)

L5 (bypass adj1 (line or bus)) near10 controller near10 switch

L4 l1 and L3

L3 710/316,317,105,315;711/114;379/219;370/395.1,466,352,419,218,400,467,422,395.72,362.ccls.

DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L2 L1

DB=USPT,USOC; PLUR=YES; OP=OR

L1 (fabric adj1 switch) same controller same (external or remote or outside)

END OF SEARCH HISTORY

h e b b cg b e e ch

Refine Search

Search Results -

Terms	Documents
L5 and (disk adj2 controller)	2

Database:
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JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L6

Refine Search

Recall Text | Clear | Interrupt

Search History

DATE: Wednesday, June 23, 2004 Printable Copy Create Case

Set Name **Query**

side by side

DB=USPT,USOC; PLUR=YES; OP=OR

L6 L5 and (disk adj2 controller)

L5 (bypass adj1 (line or bus)) near10 controller near10 switch

L4 l1 and L3

L3 710/316,317,105,315;711/114;379/219;370/395.1,466,352,419,218,400,467,422,395.72,362.ccls.

DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L2 L1

DB=USPT,USOC; PLUR=YES; OP=OR

L1 (fabric adj1 switch) same controller same (external or remote or outside)

END OF SEARCH HISTORY

h e b b cg b e e ch

First Hit Fwd Refs

End of Result Set

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L6: Entry 2 of 2 File: USPT Sep 15, 1992

DOCUMENT-IDENTIFIER: US 5148042 A
TITLE: Small electronic device capable of switching batteries by releasing a battery locking mechanism

Detailed Description Text (19):
The system bus 10 is further connected with an extending RAM 18, a backup RAM 19, a hard disc controller (HDC) 20B, a floppy disc controller (FDC) 20F, a printer controller (PRT-CONT) 21, a Universal Asynchronous Receiver/Transmitter (UART) 22, a keyboard controller (KBC) 23, a display controller (DISP-CONT) 24, and a video RAM (VRAM) 25.

Detailed Description Text (20):
The extending RAM 18 consists of a memory card of 1M-byte or 2M-bytes and is mounted on the computer as occasion demands. The backup RAM 19 has a data save area to realize the resume function, and the backup power source (VBK) is always supplied to the backup RAM 19. The hard disc controller (HDC) 20B drives and controls the hard disc drive unit 20A under the control of the CPU 11, to perform read/write operation with respect to a 3.5 inch magnetic recording medium, and the floppy disc controller 20F drives and controls the floppy disc drive unit 32 or the external floppy disc drive unit 33 as occasion demands, under the control of the CPU 11.

CLAIMS:

19. A portable computer according to claim 18, wherein the first line has a first bypass line for bypassing the first diode between the first switch and the interconnecting portion, the second line has a second bypass line for bypassing the second diode between the second switch and the interconnecting portion, the first bypass line has a first bypass switch for connecting or disconnecting the first bypass line, the second bypass line has a second bypass switch for connecting or disconnecting the second bypass line, the connection controller turns on one bypass switch corresponding to one line electrically connecting its battery and the voltage converter and turns off the other bypass switch corresponding to the other line electrically disconnecting its battery and the voltage converter when the first and second detectors detect that both of the first and second batteries are respectively locked by the first and second latches, turns off the bypass switch corresponding to the connected bypass line when the first or the second detector detects that the latch corresponding to the connected line is released by the release member, and turns on the bypass switch corresponding to the connected line when the third or the fourth detector detects that the terminal of the battery corresponding to the released latch is removed from the terminal of the battery storing portion corresponding to the removed battery.

h e b b cg b cc e

First Hit Fwd Refs

End of Result Set

Generate Collection Print

L6: Entry 2 of 2 File: USPT Sep 15, 1992

US-PAT-NO: 5148042
DOCUMENT-IDENTIFIER: US 5148042 A

TITLE: Small electronic device capable of switching batteries by releasing a battery locking mechanism

DATE-ISSUED: September 15, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nakazoe; Masayo	Tokyo			JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Kabushiki Kaisha Toshiba	Kawasaki			JP	03

APPL-NO: 07/ 578235 [PALM]
DATE FILED: September 6, 1990

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	1-343064	December 29, 1989

INT-CL: [05] H02J 9/06

US-CL-ISSUED: 307/65; 307/66, 307/86, 307/150
US-CL-CURRENT: 307/60; 307/150, 307/66, 307/86

FIELD-OF-SEARCH: 364/707, 364/708, 371/66, 365/229, 320/2, 320/5, 320/6, 429/9, 429/96-100, 307/46, 307/48, 307/64, 307/65, 307/66, 307/85-87, 307/150

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	3767933	October 1973	Bogue et al.	307/48
☐	3937937	February 1976	McVey	371/66
☐	4155015	May 1979	Nakasone et al.	307/157 X

h e b b g e e e f c e h b e ge

☐	4214172	July 1980	See	307/150
☐	4816862	March 1989	Taniguchi et al.	365/229 X
☐	4965462	October 1990	Crawford	320/2
☐	5028806	July 1991	Stewart et al.	307/66

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
59-52328	March 1984	JP	364/708

ART-UNIT: 214

PRIMARY-EXAMINER: Pellinen; A. D.

ASSISTANT-EXAMINER: Fleming; Fritz M.

ATTY-AGENT-FIRM: Finnegan, Henderson, Farabow, Garrett and Dunner

ABSTRACT:

A small electronic device includes first and second locking devices which releasably lock the batteries on a first and second mounting portions, first and second detectors which respectively detect that the locked conditions of first and second locking devices have been released, first and second switches for connecting the first and second batteries to a power supply node. The electronic device also includes a control unit which turns on the first switch to connect the first battery to the power supply node, and switches from an off state to an on state the second switch in response to a detection signal from the first detector.

19 Claims, 8 Drawing figures

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US-PAT-NO: 6546023

DOCUMENT-IDENTIFIER: US 6546023 B1

TITLE: Switch voice/data service extension to remote facilities

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Detailed Description Text - DETX (16):

ACDs 22, such as that shown in FIG. 1 typically use a proprietary interface between the switching and control fabric of the switch 38 and a line card which interfaces with external resources 24, 26, 30, 32. For example, one manufacturer of ACDs uses a timeslot interchange arrangement whereby a line card is assigned predetermined locations on a repeating TDM frame within the switch 38 for exchanging interprocessor control information, signaling control information and voice data. Other manufacturers may place interprocessor control information and/or signaling information on a separate bus.

US006546023B1

(12) **United States Patent**
Jones et al.

(10) **Patent No.: US 6,546,023 B1**
(45) **Date of Patent: Apr. 8, 2003**

(54) **SWITCH VOICE/DATA SERVICE EXTENSION TO REMOTE FACILITIES**

(75) Inventors: **Barry W. Jones**, Hoffman Estates, IL (US); **Steven T. Delong**, Woodridge, IL (US); **Jerrold S. Zdanak**, Riverside, IL (US)

(73) Assignee: **Rockwell Electronic Commerce Corp.**, Wood Dale, IL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/405,585**

(22) Filed: **Sep. 27, 1999**

(51) Int. Cl.[7] **H04J 3/16**
(52) U.S. Cl. **370/468**
(58) Field of Search 370/468, 369–395; 496/263; 485/455–465; 522/352–355; 231/389–395; 455/403, 426, 12.1, 554, 456; 348/14.12; 375/222; 340/825.5; 379/265.11, 93.09–93.29, 139, 224–229; 265/269, 242, 224–229, 212, 233–235, 111, 164, 88.25, 88.22

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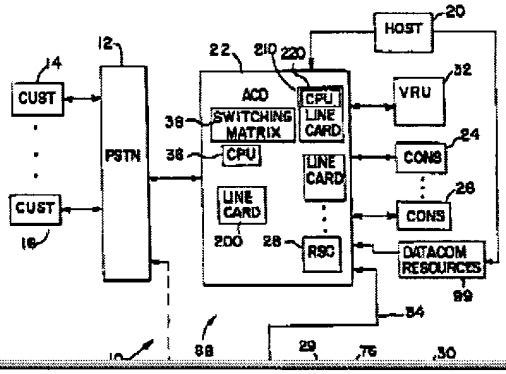
Assistant Examiner—Prenell Jones
(74) *Attorney, Agent, or Firm*—Welsh & Katz, Ltd.

(57) **ABSTRACT**

A method and apparatus are provided for exchanging control information and voice data between an automatic call distributor and a line card of the automatic call distributor located at a site remote from the automatic call distributor through a wide-bandwidth communication channel. The method includes the step of allocating at least a first portion of the bandwidth of the wide-bandwidth communication channel for the control information and at least a second portion of the bandwidth to voice data. The interprocessor control information is transceived between a controller of the automatic call distributor and a controller of the line card under a packet data format within the first portion of the bandwidth allocated for control information and the voice data is transceived under a dedicated channel format within the second portion of the bandwidth between the automatic call distributor and line card.

42 Claims, 2 Drawing Sheets



US-PAT-NO: 6542954

DOCUMENT-IDENTIFIER: US 6542954 B1

TITLE: Disk subsystem

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Detailed Description Text - DETX (3):

In the external storage device shown in the figure, N disk array controllers (controller section) 1-1 to 1-N (controllers in middle such as 1-2 are not shown, this applies to hereinbelow) are connected to a host computer (not shown) in an upper side, and provide M disk drive interface (disk drive I/F) controllers 2-1 to 2-M in a bottom side. The hardware configuration of the disk array controller will be described below in greater details. Each of M controllers of fibre channel fabric switch 3-1 to 3-M are respectively connected to the disk drive interface (I/F) controllers 2-1 to 2-M for controlling disk drive units through their fibre channel interface 5. L disk drive units are connected to one fibre channel fabric switch controller, a total of M by L disk drive units (4(1,1) to 4(M,L)) are connected to the fibre channel fabric switch controllers 3-1 to 3-M through fibre channel interfaces 6.

US006542954B1

(12) **United States Patent**
Aruga

(10) **Patent No.: US 6,542,954 B1**
(45) **Date of Patent: Apr. 1, 2003**

(54) **DISK SUBSYSTEM**

(75) Inventor: **Kazuhisa Aruga**, Odawara (JP)

(73) Assignee: **Hitachi, Ltd.**, Tokyo (JP)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/495,868**

(22) Filed: **Feb. 2, 2000**

(30) **Foreign Application Priority Data**

Feb. 2, 1999 (JP) 11-024648

(51) **Int. Cl.**[7] **G06F 13/16**; G06F 13/42

(52) **U.S. Cl.** **710/316**; 710/315; 711/114

(58) **Field of Search** 711/114, 111, 112, 714/5, 6, 7; 710/11, 62, 65, 74, 38, 315, 316

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Primary Examiner—Gary J. Portka
(74) *Attorney, Agent, or Firm*—Antonelli, Terry, Stout & Kraus, LLP

(57) **ABSTRACT**

A protocol controller disposed between switches in a fiber channel fabric switch circuit and disk drive units for converting a protocol to enable one-to-one connectivity established between controllers and disk drive units.

35 Claims, 7 Drawing Sheets